



## Complete Summary

---

### GUIDELINE TITLE

Postnatal corticosteroids to treat or prevent chronic lung disease in preterm infants.

### BIBLIOGRAPHIC SOURCE(S)

Postnatal corticosteroids to treat or prevent chronic lung disease in preterm infants. Pediatrics 2002 Feb; 109(2): 330-8. [48 references]

## COMPLETE SUMMARY CONTENT

SCOPE  
METHODOLOGY - including Rating Scheme and Cost Analysis  
RECOMMENDATIONS  
EVIDENCE SUPPORTING THE RECOMMENDATIONS  
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
QUALIFYING STATEMENTS  
IMPLEMENTATION OF THE GUIDELINE  
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT  
CATEGORIES  
IDENTIFYING INFORMATION AND AVAILABILITY

## SCOPE

### DISEASE/CONDITION(S)

- Chronic lung disease (also known as bronchopulmonary dysplasia)
- Very low birth weight

### GUIDELINE CATEGORY

Prevention  
Treatment

### CLINICAL SPECIALTY

Pediatrics  
Pulmonary Medicine

### INTENDED USERS

Advanced Practice Nurses  
Nurses

Physician Assistants  
Physicians

#### GUIDELINE OBJECTIVE(S)

To review the short- and long-term effects of systemic and inhaled postnatal corticosteroids for the prevention or treatment of evolving or established chronic lung disease and to make recommendations for the use of corticosteroids in infants with very low birth weight

#### TARGET POPULATION

Neonates with very low birth weight at risk for, or with, chronic lung disease

#### INTERVENTIONS AND PRACTICES CONSIDERED

1. Systemic early postnatal corticosteroid therapy (intravenous dexamethasone at <96 hours of age)
2. Systemic moderately early postnatal corticosteroid therapy (intravenous dexamethasone at 7 to 14 days' postnatal age)
3. Systemic delayed postnatal corticosteroid therapy (intravenous or enteral dexamethasone starting after 3 weeks of age)
4. Inhaled steroids

#### MAJOR OUTCOMES CONSIDERED

- Mortality rates
- Chronic lung disease rates
- Short-term adverse effects of corticosteroid use
- Long-term adverse effects of corticosteroid use (incidence of cerebral palsy and neurodevelopmental impairment)

### METHODOLOGY

#### METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)  
Searches of Electronic Databases

#### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

An attempt was made to identify all published systematic reviews and meta-analyses on the use of corticosteroids (systemic or inhaled) for the prevention or treatment of chronic lung disease in preterm infants, using the MEDLINE, EMBASE, CINAHL, and the Cochrane Library electronic databases and personal files from 1983 through April 2001. Data were also included from 2 trials published after the identified systematic reviews. Twelve systematic reviews published between 1992 and 2001 were identified. Nine addressed the use of systemic steroids, 2 described the use of inhaled steroids, and 1 addressed both.

#### NUMBER OF SOURCE DOCUMENTS

Twelve systematic reviews and 2 other studies published after the identified systematic reviews

#### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

#### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

#### METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses  
Systematic Review with Evidence Tables

#### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

#### METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

#### RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

#### COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

#### METHOD OF GUIDELINE VALIDATION

Peer Review

#### DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

### RECOMMENDATIONS

#### MAJOR RECOMMENDATIONS

1. On the basis of limited short-term benefits, the absence of long-term benefits, and the number of serious short- and long-term complications, the routine use of systemic dexamethasone for the prevention or treatment of chronic lung disease in infants with very low birth weight is not recommended.
2. Postnatal use of systemic dexamethasone for the prevention or treatment of chronic lung disease should be limited to carefully designed randomized double-masked controlled trials. The primary outcome of these trials should be survival without long-term developmental impairments, and the potential confounders of contamination and crossover should be avoided.
3. Long-term neurodevelopmental assessment of infants who are or have been subjects in trials of dexamethasone to prevent or treat chronic lung disease is strongly encouraged.
4. Clinical trials investigating the use of alternative anti-inflammatory corticosteroids, systemic and inhaled, are required before additional recommendations can be made.
5. Outside the context of a randomized, controlled trial, the use of corticosteroids should be limited to exceptional clinical circumstances (e.g., an infant on maximal ventilatory and oxygen support). In those circumstances, parents should be fully informed about the known short- and long-term risks and agree to treatment.

#### CLINICAL ALGORITHM(S)

None provided

### EVIDENCE SUPPORTING THE RECOMMENDATIONS

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Twelve systematic reviews or meta-analyses published between 1992 and 2001 were identified. Nine addressed the use of systemic steroids, 2 described the use of inhaled steroids, and 1 addressed both. In addition, the meta-analysis for systemic early postnatal corticosteroid therapy was updated by incorporating data from 2 subsequently published studies. The evidence, including long-term outcomes, is tabulated in the original guideline document.

### BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

#### POTENTIAL BENEFITS

Appropriate use of postnatal corticosteroids in preterm infants

#### POTENTIAL HARMS

Not stated

### QUALIFYING STATEMENTS

#### QUALIFYING STATEMENTS

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Living with Illness  
Staying Healthy

### IOM DOMAIN

Effectiveness  
Safety

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Postnatal corticosteroids to treat or prevent chronic lung disease in preterm infants. Pediatrics 2002 Feb; 109(2): 330-8. [48 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

2002 Feb

### GUIDELINE DEVELOPER(S)

American Academy of Pediatrics - Medical Specialty Society  
Canadian Paediatric Society - Medical Specialty Society

### SOURCE(S) OF FUNDING

American Academy of Pediatrics

### GUIDELINE COMMITTEE

Committee on Fetus and Newborn

Fetus and Newborn Committee

#### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Committee on Fetus and Newborn, 2001-2002: Lillian R. Blackmon, MD, Chairperson; Edward F. Bell, MD; William A. Engle, MD; William P. Kanto, Jr, MD; Gilbert I. Martin, MD; Carol A. Miller, MD; Warren Rosenfeld, MD; Michael E. Speer, MD; Ann R. Stark, MD

Liaisons: Jenny Ecord, MS, RNC, NNP, PNP; Solomon Iyasu, MBBS, MPH; Charles J. Lockwood, MD; Keith J. Barrington, MD; Linda L. Wright, MD

Consultant: Arne Ohlsson, MD, MSc

Staff: Jim Couto, MA

Canadian Paediatric Society, Fetus and Newborn Committee, 2001-2002: Keith J. Barrington, MD, Chairperson; Arne Ohlsson, MD, MSc, Immediate Past Chairperson; Khalid Aziz, MD, Director; Deborah Davis, MD; Shoo Lee, MD; Koravangattu Sankaran, MD; John Van Aerde, MD

Liaisons: Lillian R. Blackmon, MD; Jill Boulton, MD; Joan Crane, MD; Catherine McCourt, MD; Larry Reynolds, MD; Amanda Symington

Consultants: James Lemons, MD; Vibhuti Shah, MD

#### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

#### GUIDELINE STATUS

This is the current release of the guideline.

American Academy of Pediatrics (AAP) Policies are reviewed every 3 years by the authoring body, at which time a recommendation is made that the policy be retired, revised, or reaffirmed without change. Until the Board of Directors approves a revision or reaffirmation, or retires a statement, the current policy remains in effect.

#### GUIDELINE AVAILABILITY

Electronic copies: Available from the [American Academy of Pediatrics \(AAP\) Policy Web site](#).

Print copies: Available from AAP, 141 Northwest Point Blvd., P.O. Box 927, Elk Grove Village, IL 60009-0927.

## AVAILABILITY OF COMPANION DOCUMENTS

None available

## PATIENT RESOURCES

None available

## NGC STATUS

This summary was completed by ECRI on July 22, 2002.

## COPYRIGHT STATEMENT

This National Guideline Clearinghouse (NGC) summary is based on the original guideline, which is subject to the guideline developer's copyright restrictions. Please contact the Permissions Editor, American Academy of Pediatrics (AAP), 141 Northwest Point Blvd, Elk Grove Village, IL 60007.

© 1998-2004 National Guideline Clearinghouse

Date Modified: 5/10/2004

**FIRSTGOV**

